AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. The amendments below introduce no new matter and support for the amendment is replete throughout the specification and claims as originally filed. These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter, or agreement with any objection or rejection of record.

Listing of Claims:

1. (Currently Amended) A composition comprising an isolated ~~amino acid sequence~~ polypeptide fragment of a mature mitochondrial MDH polypeptide that comprises an amino acid sequence that comprises a portion of SEQ ID NO:4, wherein said portion comprises SEQ ID NO:6 and has an activity ~~chosen~~ selected from: DNA nuclease activation activity, and cell killing activity.

2. (Original) The composition of claim 1, wherein said portion comprises SEQ ID NO:7.

3. (Currently Amended) A composition comprising a conjugate that comprises an amino acid sequence comprising SEQ ID NO:6, wherein said amino acid sequence is operably linked to a first molecule that specifically binds to a cell molecule, wherein said conjugate activity is selected from DNA nuclease activation activity and cell killing activity.

4. (Original) The composition of claim 3, wherein said amino acid sequence comprises SEQ ID NO:7.

5. (Original) The composition of claim 3, wherein said amino acid sequence further comprises a N-terminal signal peptide.

6. (Original) The composition of claim 3, wherein said amino acid sequence further comprises a cell internalization peptide.

7. (Original) The composition of claim 3, wherein said amino acid sequence further comprises a nuclear localization peptide.

8. (Original) The composition of claim 3, wherein said first molecule comprises an antibody.

9. (Original) The composition of claim 8, wherein said antibody specifically binds to cancer cells.

10. (Original) The composition of claim 9, wherein said cancer cells are chosen from non-small cell lung carcinoma cells, breast cancer cells, gastrointestinal cancer cells, renal carcinoma cells, and liver cancer cells.

11. (Original) The composition of claim 10, wherein said cancer cells comprise liver cancer cells.

12. (Original) The composition of claim 11, wherein said liver cancer cells comprise hepatocellular cancer cells.

13. (Original) The composition of claim 11, wherein said antibody that binds to liver cancer cells comprises an antibody chosen from Hepama-1, anti-PLC1, anti-PLC2, K-PLC1, K-PLC2, K-PLC3, 49-D6,7-E10, 34-A4,26-A10, 34-B9,79-C8,16-E10, 5D3, 5C3, 2C6, a-AFP, H hHP-1, mAb 95, YPC2/38.8, P215457, PM4E9917, HAb25, HAb27, KY-1, KY-2, KY-3, 9403 Mab, KM-2, S1, 9B2, IB1, A9-84, SF-25, AF-10, XF-8, AF-20, a-hIRS-1, FB-50, SF 31, SF 90, 2A3D2, and 2D11E2.

14. (Original) The composition of claim 11, wherein said antibody that binds to liver cancer cells comprises Hepama-1 antibody.

15. (Original) The composition of claim 14, wherein said antibody comprising Hepama-1 antibody is humanized.

16. (Original) The composition of claim 9, wherein said cancer cells are chosen from B cell lymphoma cells, myeloid leukemia cells, renal carcinoma cells, colon cancer cells, pancreatic cancer cells, colorectal cancer cells, ovarian cancer cells, and prostate cancer cells.

17. (Original) The composition of claim 3, wherein said first molecule comprises a ligand of a cell receptor.

18. (Original) The composition of claim 17, wherein said ligand comprises a growth factor.

19. (Original) The composition of claim 18, wherein said growth factor is chosen from epidermal growth factor, insulin-like growth factor, fibroblast growth factor, and vascular endothelial growth factor.

20-47 (Cancelled).